

Name \_\_\_\_\_

## Ordered Pairs

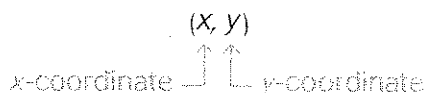
**Essential Question** How can you identify and plot points on a coordinate grid?

COMMON CORE STANDARD CC.5.G.1

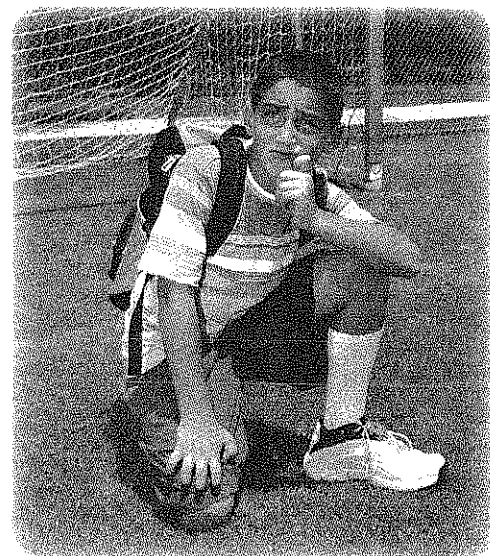
Graph points on the coordinate plane to solve real-world and mathematical problems.

**CONNECT** Locating a point on a coordinate grid is similar to describing directions using North-South and West-East. The horizontal number line on the grid is the **x-axis**. The vertical number line on the grid is the **y-axis**.

Each point on the coordinate grid can be described by an **ordered pair** of numbers. The **x-coordinate**, the first number in the ordered pair, is the horizontal location, or the distance the point is from 0 in the direction of the x-axis. The **y-coordinate**, the second number in the ordered pair, is the vertical location, or the distance the point is from 0 in the direction of the y-axis.



The x-axis and the y-axis intersect at the point (0, 0), called the **origin**.



## UNLOCK the Problem

REAL WORLD



Write the ordered pairs for the locations of the arena and the aquarium.

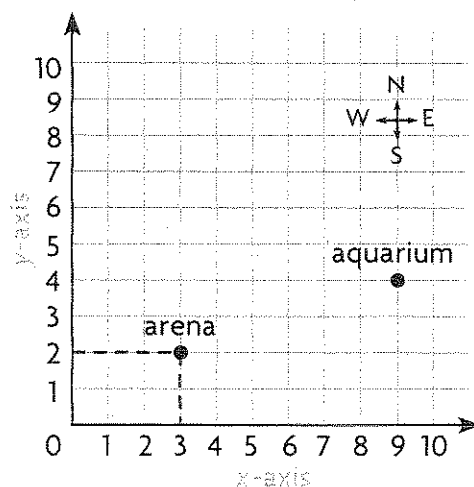
Locate the point for which you want to write an ordered pair.

Look below at the x-axis to identify the point's horizontal distance from 0, which is its x-coordinate.

Look to the left at the y-axis to identify the point's vertical distance from 0, which is its y-coordinate.

So, the ordered pair for the arena is (3, 2) and the ordered pair for the aquarium

is (\_\_\_\_\_, \_\_\_\_\_).



- Describe the path you would take to get from the origin to the aquarium, using horizontal, then vertical movements.

---



---

### Example 1 Use the graph.

A point on a coordinate grid can be labeled with an ordered pair, a letter, or both.

#### **A** Plot the point $(5, 7)$ and label it $J$ .

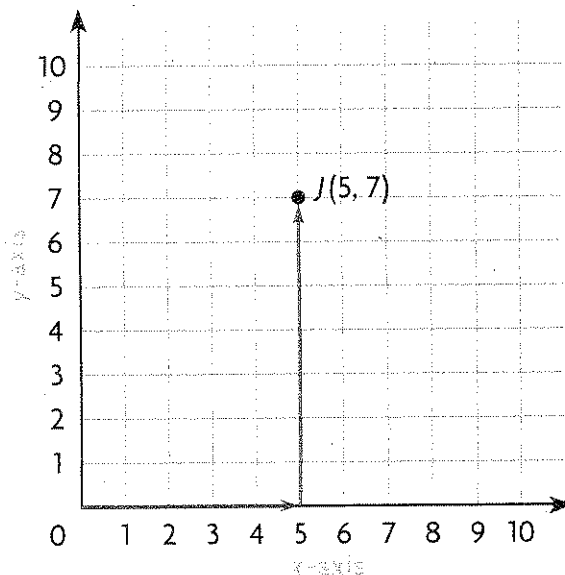
From the origin, move right 5 units and then up 7 units.

Plot and label the point.

#### **B** Plot the point $(8, 0)$ and label it $S$ .

From the origin, move right \_\_\_\_\_ units and then up \_\_\_\_\_ units.

Plot and label the point.



### Example 2 Find the distance between two points.

You can find the distance between two points when the points are along the same horizontal or vertical line.

- Draw a line segment to connect point  $A$  and point  $B$ .
- Count vertical units between the two points.

There are \_\_\_\_\_ units between points  $A$  and  $B$ .

1. Points  $A$  and  $B$  form a vertical line segment and have the same  $x$ -coordinates. How can you use subtraction to find the distance between the points?

---

---

---

---

2. Graph the points  $(3, 2)$  and  $(5, 2)$ . Explain how you can use subtraction to find the horizontal distance between these two points.

---

---

---

